

REMARKS

In the non-final Office Action, the Examiner rejects claims 1-50 based on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of HARDY (U.S. Patent No. 6,370,120); rejects claims 1, 21, 22, and 49 under 35 U.S.C. § 102(e) as being anticipated by ZHU et al. (U.S. Patent No. 5,768,527); rejects claims 23-27 under 35 U.S.C. § 103(a) as being unpatentable over ZHU et al. in view of RANDIC (U.S. Patent No. 6,275,797); rejects claim 45 under 35 U.S.C. § 103(a) as being unpatentable over ZHU et al. a in view of ELLIOTT et al. (U.S. Patent No. 6,335,927); rejects claims 46-48 under 35 U.S.C. § 103(a) as being unpatentable over ZHU et al. in view of ELLIOTT et al. and in further view of RANDIC (U.S. Patent No. 6,275,797); objects to claim 2-20 as being dependent on a rejected base claim; and allows claims 28-44 and 50. Applicants respectfully traverse the rejections under 35 U.S.C. §§ 102 ad 103, and the judicially created doctrine of nonstatutory obviousness-type double patenting¹.

By way of this Amendment, claims 1-28, 30-43, 45-48, and 50 have been amended to improve form. No new matter has been introduced by way of the present amendment. Claims 1-50 remain pending in the present application. Reconsideration and allowance of all claims in view of the preceding amendments and the following remarks are respectfully requested.

¹ As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, assertions as to dependent claims, reasons for modifying a reference and/or combining references, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

As an initial matter, Applicants would like to extend their appreciation to the Examiner for the allowance of claims 28-44 and 50 and the indication that claims 2-20 include allowable subject matter.

Rejections based on Nonstatutory Obviousness-Type Double Patenting in view of

HARDY

Claims 1-50 stand rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of HARDY. Applicants respectfully traverse.

While not concurring with the rejection, but to expedite prosecution, a terminal disclaimer has been filed concurrently with this paper to overcome the rejection. Accordingly, withdrawal of the rejection of claims 1-50 based on the judicially created grounds of obviousness-type double patenting is respectfully requested.

Rejections Under 35 U.S.C. § 102(e)

Claims 1, 21, 22, and 49 have been rejected under 35 U.S.C. § 102(e) as being anticipated by ZHU et al. Applicants respectfully traverse this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention. Any feature not directly taught must be inherently present. In other words, the identical invention must be shown in as complete detail as contained in the claims. See M.P.E.P. § 2131. ZHU et al. does not disclose or suggest the combination of features recited in claims 1, 21, 22, and 49.

Independent claim 1, as amended, recites a method for monitoring perceived quality of a packet-switched voice service in a network that includes receiving a

packetized voice communication via the packet-switched voice service; obtaining at least one objective measurement from the received packetized voice communication; deriving a user perceived quality of voice data based on the at least one objective measurement; and providing the user perceived quality of voice data, where the receiving, obtaining, deriving, and providing are performed in substantially real-time. ZHU et al. does not disclose, either explicitly or implicitly, the combination of features recited in amended claim 1.

For example, ZHU et al. does not disclose deriving a user perceived quality of voice data based on the at least one objective measurement, as recited in amended claim 1. The Examiner relies on col. 6, line 17 and col. 4, line 43 of ZHU et al. for allegedly disclosing this feature (Office Action – pg. 6). Applicants respectfully disagree with the Examiner's interpretation of ZHU et al.

Col. 6, lines 16-19 of ZHU et al. recites “[t]he importance of each media for the perceived service quality by end users is typically different. For example, audio quality is in general more important than video quality.” This section of ZHU et al. merely discloses that for multimedia streams, a quality of the audio may be considered more important than the quality of the video. This section of ZHU et al. does not disclose or suggest deriving a user perceived quality of voice data based on the at least one objective measurement, as recited in amended claim 1.

Col. 4, lines 42-44 recite “[t]he incurred delay due to delay jitter smoothing and packet retransmission is perceived by the user as an initial delay.” This section of ZHU et al. discloses that delay jitter smoothing and packet retransmission are perceived as

initial delays before any actual media playback is experienced by the user. Clearly, this initial delay cannot form a basis for deriving a user perceived quality of voice data, since no voice data would have been received during the time of this delay.

Even assuming *arguendo* that the estimated information loss rate of col. 4, lines 24-28 of ZHU et al., the roundtrip delay of col. 4, line 2 of ZHU et al., the delay jitter of col. 5, line 48 of ZHU et al., or the retransmission delay of col. 4, lines 42-44 of ZHU et al. may be reasonably construed as objective measurements obtained from the received packetized voice communication (a point that Applicants do not concede), there is absolutely no disclosure or suggestion in these sections of ZHU et al. that the estimated information loss rate, the roundtrip delay, the delay jitter, or the retransmission delay form the basis for deriving a user perceived quality of voice data, as would be required based on the Examiner's apparent interpretation of claim 1 in view of ZHU et al.

For at least these reasons, claim 1 is not anticipated by ZHU et al. Reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) based on ZHU et al. are respectfully requested.

Claims 21 and 22 depend from claim 1 and are, therefore, not anticipated by ZHU et al. for at least the reasons set forth above with respect to claim 1. Moreover, these claims are not anticipated by ZHU et al. for reasons of their own.

For example ZHU et al. does not disclose obtaining at least one objective measurement of a reconstituted digital representation of the received packetized voice communication, the reconstituted digital representation being obtained from a receiver codec, as recited in claim 21. The Examiner relies on the multiplexer 1012 and error

estimator 1008 disclosed at col. 12, lines 10-24 of ZHU et al. as allegedly disclosing these features of claim 21 (Office Action – pp. 6-7). Applicants respectfully disagree.

Col. 12, lines 10-24 of ZHU et al. discloses:

FIG. 10, numeral 1000, shows one detailed embodiment of a modem that includes an auxiliary channel multiplexer (MUX) (1012) and an error estimator for p' (p' Est) (1008) in accordance with the present invention. This is done by monitoring the error metrics generated by the data pump (DP) (1006) in the modem and translating this metric into an estimate of the bit error rate p' in the p' estimator (p' Est) (1008). This information is then passed to the multiplexer (MUX) (1012) to be relayed to the client via data terminal equipment (DTE) (1014). A telephone company interface (Telco Int) (1002) is coupled to a DAA (Data Access Arrangement) (1004) that is coupled to the data pump (1006). The data pump (1006) is coupled to a host processor (host proc) (1010) that passes information to the multiplexer (1012).

This section of ZHU et al. discloses that a data pump 1006 generates error metrics that are translated into an estimate of the bit error rate p' by error estimator 1008. The estimated bit error rate p' is then transmitted to a client via multiplexer 1012. As disclosed at col. 8, lines 41-54 of ZHU et al., the bit error rate is used to determine the maximum rate at which the multimedia packets are streamed. Contrary to the Examiner's assertions, this section of ZHU et al. does not disclose obtaining at least one objective measurement of a reconstituted digital representation of the received packetized voice communication, the reconstituted digital representation being obtained from a receiver codec, as recited in claim 21.

It would appear that the Examiner has construed ZHU et al.'s multiplexer 1012 as somehow enabling or disclosing the “reconstituted digital representation of the received packetized voice communication” of claim 21. Such an assertion lacks merit.

Multiplexer 1012, as described in col. 12, lines 10-24 of ZHU et al. is simply a means for enabling modem 1000 to transmit both data from host processor 1010 and the estimated bit error rate p' to the client via interface 1014. Contrary to the Examiner's allegations,

the information passed from data pump 1006 to the error estimator 1008 is clearly not a reconstituted digital representation of the received packetized voice communication, as recited in claim 21.

Because ZHU et al. does not disclose obtaining at least one objective measurement of a reconstituted digital representation of the received packetized voice communication, ZHU et al., clearly cannot disclose, either explicitly or implicitly, that the reconstituted digital representation is obtained from a receiver codec, as recited in claim 21.

For at least these additional reasons, claim 21 is not anticipated by ZHU et al. Reconsideration and withdrawal of the rejection of claim 21 under 35 U.S.C. § 102(b) based on ZHU et al. are respectfully requested.

ZHU et al. also does not disclose that the at least one objective measurement includes determining differences among successive samples in the reconstituted digital representation, as recited in claim 22. The Examiner again relies on the multiplexer 1012 and error estimator 1008 disclosed at col. 12, lines 10-24 of ZHU et al. as allegedly disclosing these features of claim 22 (Office Action – pp. 6-7). Applicants respectfully disagree.

As discussed above, col. 12, lines 10-24 of ZHU et al. discloses that a data pump 1006 generates error metrics that are translated into an estimate of the bit error rate p' by error estimator 1008. The estimated bit error rate p' is then transmitted to a client via multiplexer 1012. As disclosed at col. 8, lines 41-54 of ZHU et al., the bit error rate is used to determine the maximum rate at which the multimedia packets are streamed.

Contrary to the Examiner's assertions, this section of ZHU et al. does not disclose that the at least one objective measurement includes determining differences among successive samples in the reconstituted digital representation, as recited in claim 22.

As described above in relation to claim 21, ZHU et al. clearly does not disclose, either explicitly or implicitly, obtaining at least one objective measurement of a reconstituted digital representation of the received packetized voice communication. Accordingly, ZHU et al., cannot reasonably be construed as disclosing, either explicitly or implicitly, that the at least one objective measurement includes determining differences among successive samples in the reconstituted digital representation, as recited in claim 22.

For at least these additional reasons, claim 22 is not anticipated by ZHU et al. Reconsideration and withdrawal of the rejection of claim 22 under 35 U.S.C. § 102(b) based on ZHU et al. are respectfully requested.

Independent claim 49 recites features similar to (yet possibly different in scope than) those set forth above with respect to claim 1. Accordingly, claim 49 is not anticipated by ZHU et al. for at least reasons similar to those set forth above with respect to claim 1. Reconsideration and withdrawal of the rejection of claim 49 under 102(b) based on ZHU et al. are respectfully requested.

Rejection Under 35 U.S.C. § 103(a) based on ZHU et al. and RANDIC

Claims 23-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ZHU et al. in view of RANDIC. Applicants respectfully traverse this rejection.

Claims 23-27 depend from claim 22. Without acquiescing in the rejection of claims 23-27, Applicants respectfully submit that the disclosure of RANDIC does not remedy the deficiencies in the disclosure of ZHU et al. discussed above with respect to claim 22. Accordingly, claims 23-27 are patentable over ZHU et al. and RANDIC, whether taken individually or in any proper combination, for at least the reasons set forth above with respect to claim 22.

Reconsideration and withdrawal of the rejection of claims 23-27 under 35 U.S.C. § 103(a) based on ZHU et al. and RANDIC are respectfully requested.

Rejection Under 35 U.S.C. § 103(a) based on ZHU et al. and ELLIOTT et al.

Claim 45 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over ZHU et al. in view of ELLIOTT et al. Applicants respectfully traverse this rejection.

Claim 45, as amended, depends from claim 28. Because claim 28 has been allowed, claim 45 should now be in condition for immediate allowance over the art of record. Reconsideration and withdrawal of the rejection of claim 45 under 35 U.S.C. § 103(a) based on ZHU et al. and ELLIOTT et al. are respectfully requested.

Rejection Under 35 U.S.C. § 103(a) based on ZHU et al. and ELLIOTT et al., and RANDIC

Claims 46-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over ZHU et al. and ELLIOTT et al., and further in view of RANDIC. Applicants respectfully traverse this rejection.

Claims 46-48, as amended, now depend from claim 28. Because claim 28 has been allowed, claims 46-48 should now be in condition for immediate allowance over the

art of record. Reconsideration and withdrawal of the rejection of claims 46-48 under 35 U.S.C. § 103(a) based on ZHU et al., ELLIOTT et al., and RANDIC are respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of this application. In the event that the application is not believed to be in condition for allowance, the Examiner is invited to contact Applicants' representative at the number shown below to expedite prosecution of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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